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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,980

06/19/2005

Michel J Zwanenburg

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

DINH, TRINH VO

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

06/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/539,980	<b>Applicant(s)</b> ZWANENBURG ET AL.	
	<b>Examiner</b> Trinh Vo Dinh	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2007.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 06/19/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election of claims 1-13 in the reply filed on 05/10/2007 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Therefore, non-elected claims 14-21 have been withdrawn from consideration.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ouchi et al (US 6,055,251).

Respecting claims 1 and 5, Ouchi discloses, in Figs. 13-16, light source control system comprising at least one light source, each light source emitting a light signal at a discrete frequency and a reference signal at the discrete frequency; a photodetector (413, 509, 609) optically coupled to the light source, the photodetector designed to receive the light signal; and at least one lock-in system (406-407, 411-412, 416) coupled to the photodetector and each light source, each lock-in system receiving the light signal from the photodetector and receiving the reference signal from the light source wherein each lock-in system produces an intensity value of the light source based on the light signal and the reference signal and the intensity value is the intensity of the light signal at the associated discrete frequency (col. 11 line 9 to col. 13 line 21).

Respecting claims 2-3, Ouchi discloses, in Figs. 13-16, each light source comprises a control unit; and a colored light source designed to receive a drive signal from the control unit and produce the light signal based on the drive signal, and the control unit is designed to receive a clock signal and a power signal, produce the reference signal at the discrete frequency based on the clock signal, and produce the drive signal based on the reference signal and the power signal (col. 11 line 9 to col. 13 line 21).

Respecting claims 6-7, Ouchi discloses each lock-in system comprises a frequency multiplier (407, 406); and a low-pass filter (416), the filter coupled to the frequency multiplier; wherein the intensity value is the product of the received light signal and the reference signal processed through the multiplier, and filtered to remove non-dc portions.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi.

Respecting claims 4 and 8, Ouchi discloses every feature of the claimed invention except the photodetector being a single-junction photodiode or a multi-junction photodiode. However, using a single-junction or multi-junction diode has been a well-known practice in the art to enhance light signal. Therefore to select well known types of photodiode for photodetector would have been deemed obvious to one skill in the art.

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Respecting claims 9-13, Ouchi discloses, in Figs. 13-16, the at least one lock-in system comprises a plurality of lock-in devices, each lock-in device coupled to the photodetector to receive a portion of the light signal wherein each lock-in system comprises a frequency multiplier (407, 406); and a low-pass filter (416), the filter coupled to the frequency multiplier; wherein the intensity value is the product of the received light signal and the reference signal processed through the multiplier, and filtered to remove non-dc portions, and the intensity value is the sum of the partial intensity values.


### *Inquiry*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821. The examiner can normally be reached on Monday to Friday from 9:30AM to 6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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*May 29, 2007*

  
TRINH DINH  
PRIMARY EXAMINER